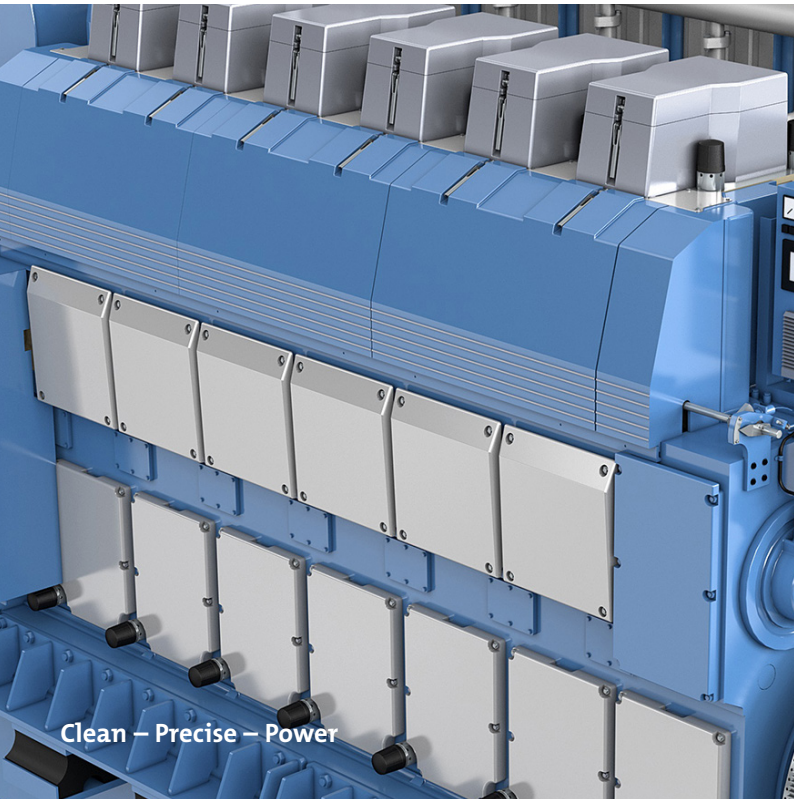
Marine

Rolls-Royce

The Bergen marine engine and propulsion portfolio 2017



For over 100 years of operation Rolls-Royce has delivered more than 10,000 four-stroke medium-speed engines for marine propulsion and land based applications worldwide.

These engines operate in commercial and military vessels, offshore supply and exploration vessels, tankers, ferries, cruise ships and fishing boats.

Rolls-Royce engines also equip power stations and pipelines for industrial and land-based municipal applications.

For the marine market, Rolls-Royce can offer a wide range of engines to suit the different power demands, with power outputs from 1843kW up to 8000kW operating on Marine Diesel Oil or Heavy Fuel Oil.

Our new B33:45 engine was launched for sale in 2014. Based on a top modern, modularised design the B33:45 range have set a new industry standard in terms of fuel efficiency, low emission and low life cycle cost.

In addition we offer well proven gas engines for marine – both mechanical or gas-electric drive. Power outputs for marine gas range from 1401kW up to 9500kW.

The power solution can also be integrated with our comprehensive propulsion system portfolio including MTU high speed engines, propellers, azimuth thrusters, tunnel thrusters, automation and control including DP (up to and including DP3).

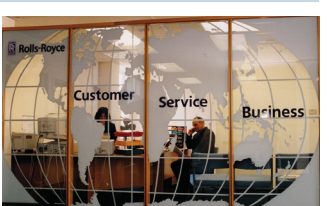
Rolls-Royce also ensures extensive long term service agreements benefitting all marine and land-based applications. To support the high reliability required of such installations, the Bergen office runs an efficient service organisation with the highest possible availability of spare parts from stock.

Highly qualified service engineers are available 24 hours a day every day of the year. Our network also provides customers with the expertise of more than 40 sales and service centres around the world.

A unique combination of high-quality performance, reliability and cost-effective operation has always thrived at the heart of Rolls-Royce applications. All the time we have stayed true to our philosophy: high power, low fuel consumption, reliability and ease of service. Major investments in the development of new products and equipment ensure

Rolls-Royce is ready to meet the challenges the market puts on a specialised supplier of medium-speed diesel and gas engines.

Trusted
to deliver
excellence



Contact us for more information on our entire range of products.

The global support network - Marine

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DENMARK

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FINLAND

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(Foundry)

(Steering Gear)

(Power Electric Systems)
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General conditions for marine engines

Marine liquid fuel engine

Ratings are according to ISO 3046-1, at maximum 45°C ambient air temperature and maximum 32°C sea water temperature. Specific fuel oil consumption is based on MDO with a net calorific value of 42,7 MJ/kg and no engine driven pumps. For each engine driven pump, there is a need to add 0,5%.

Emissions

The marine diesel engines comply with the requirements of the IMO Tier II without any external cleaning system. IMO Tier III is met by the use of a Selective Catalytic Reactor (SCR) system.

The marine gas engines comply with IMO Tier III with no need for a SCR system.

Heavy fuel oil operation

The engines are designed for operation on heavy fuel oil with viscosity up to 700 cSt at 50°C ISO 8217 RMK77. Ratings will be specified subject to type of application.

Marine gas engine

The marine gas engines give the following reductions in emissions compared with diesels IMO Tier II: 92% NOx, net 22% greenhouse gases and close to zero SOx and particulate matter. Marine gas engine ratings are according to ISO 3046-1, at maximum 45°C ambient air temperature and maximum 32°C sea water temperature. Specific fuel gas consumption excluding engine driven pumps is based on reference natural gas with Methane number above 70 and net calorific value of 36 MJ/nm^3. If there are engine driven pumps, add 0,5% for each pump. Gas feed temperature is 20-40°C. Minimum gas feed pressure to Gas Regulating Unit to be 4,5 barg.

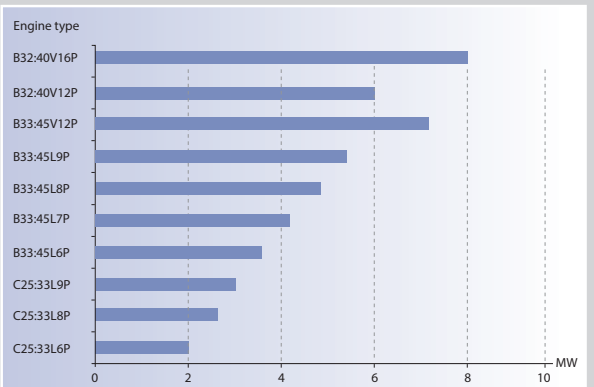
Dimensions

All dimensions are in mm. Dimensions and weights are given for guidance purposes only and are based on a typical specification. For detailed information please contact Rolls-Royce Marine.

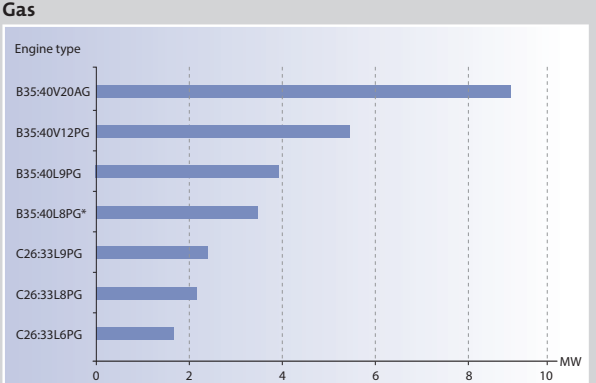
Note: Due to continuous development, some data may change without notice.

Marine engine product range

Liquid fuel



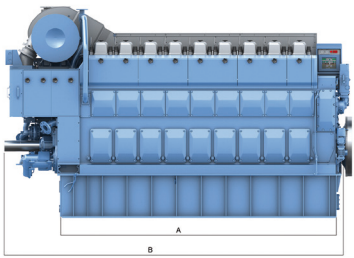
Gas

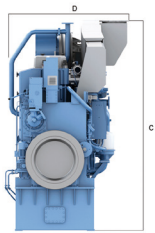


*Subject to approval prior to sales

Propulsion engines – Liquid fuel

Bergen C25:33L





Principal dimensions

Cylinder diameter 250mm. Piston stroke 330mm.

Engine type	A	B	C	D	Weight dry engine
C25:33L6P	3170	4036	3179	1775	18300 kg
C25:33L8P	3930	4796	3195	1873	23200 kg
C25:33L9P	4310	5176	3230	1873	25000 kg

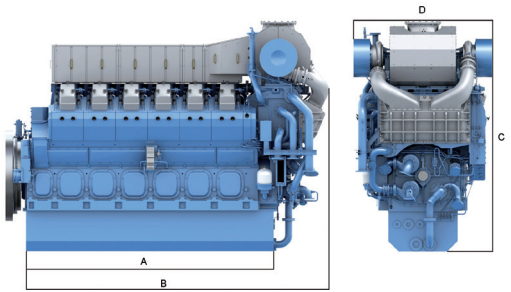
Technical data

Engine type		C25:33L6P	C25:33L8P	C25:33L9P
Number of cylinders		6	8	9
Engine speed	r/min	900/1000*	900/1000*	900/1000*
Mean piston speed	m/s	10/11	10/11	10/11
Max. continuous rating (MCR)	kW	1920/2000	2560/2665	2880/3000
Max. continuous rating (MCR)	BHP (metric)	2610/2720	3480/3625	3915/4080
Mean effective pressure (BMEP)	bar	26.4/24.7	26.4/24.7	26.4/24.7
Specific fuel consumpion	g/kWh	182/185	182/185	182/185
Specific lub. oil consumpion	g/kWh	0.7	0.7	0.7
Cooling water temp. engine outlet	°C	90	90	90

*MDO operations.
Dimensions given apply for rigidly mounted engines with wet sump. Dry sump can be supplied upon request.
Front end P.T.O. can be delivered upon request.

Propulsion engines – Liquid fuel

Bergen B32:40V



Principal dimensions

Cylinder diameter 320mm. Piston stroke 400mm.

Engine type	A	B	C	D	Weight dry engine
B32:40V12P	5176	6040	4526	2712	56000 kg
B32:40V16P	6426	7489	4830	3192	73000 kg

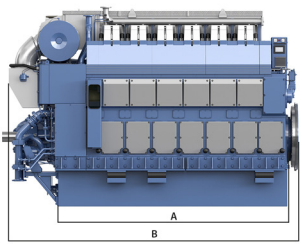
Technical data

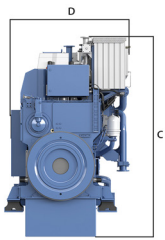
Engine type		B32:40V12P	B32:40V16P
Number of cylinders		12	16
Engine speed	r/min	750	750
Mean piston speed	m/s	10	10
Max. continuous rating (MCR)	kW	6000	8000
Max. continuous rating (MCR)	BHP (metric)	8160	10880
Mean effective pressure (BMEP)	bar	24.9	24.9
Specific fuel consumpion	g/kWh	184	184
Specific lub. oil consumpion	g/kWh	0.8	0.8
Cooling water temp. engine outlet	°C	90	90

Dimensions given apply for rigidly mounted engines with wet sump. Dry sump can be supplied upon request.
Front end P.T.O. can be delivered upon request

Propulsion engines – Liquid fuel

Bergen B33:45L





Principal dimensions

Cylinder diameter 330mm. Piston stroke 450 mm.

Engine type	A	B	C	D	Weight dry engine
B33:45L6P	4535	5622	3892	2227	40500 kg
B33:45L7P	5055	6142	3892	2227	47000 kg
B33:45L8P	5575	6662	4039	2320	52100 kg
B33:45L9P	6095	7182	4039	2320	63200 kg
B33:45V12P	5410	6867	4544	3138	74300 kg

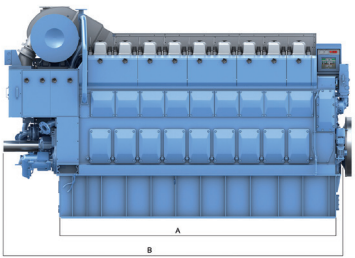
Technical data

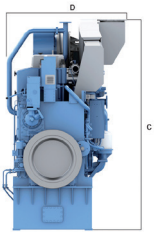
Engine type		B33:45L6P	B33:45L7P	B33:45L8P	B33:45L9P	B33:45V12P
Number of cylinders		6	7	8	9	12
Engine speed	r/min	750	750	750	750	750
Mean piston speed	m/s	11.2	11.2	11.2	11.2	11.2
Max. continuous rating (MCR)	kW	3600	4200	4800	5400	7200
Mean effective pressure (BMEP)	bar	25	25	25	25	25
Specific fuel consumpion	g/kWh	175*	175*	175*	175*	176
Specific lub. oil consumpion	g/kWh	0.8	0.8	0.8	0.8	0.8
Cooling water temp. engine outlet	°C	90	90	90	90	90

* At 85% load along propeller curve
Weight dry engine excludes flywheel and transport foundation.
Dimensions given apply for resiliently mounted engines.

Propulsion engines – Gas

Bergen C26:33L





Principal dimensions

Cylinder diameter 260mm. Piston stroke 330mm.

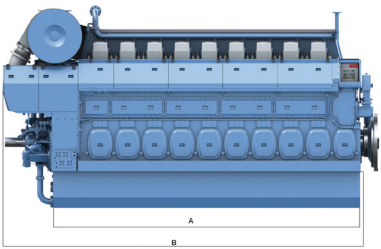
Engine type	A	B	C	D	Weight dry engine
C26:33L6PG	3170	4176	3161	1729	17500 kg
C26:33L8PG	3930	4936	3261	1785	25800 kg
C26:33L9PG	4310	5316	3161	1785	29000 kg

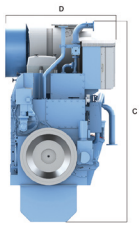
Technical data

Engine type		C26:33L6PG	C26:33L8PG	C26:33L9PG
Number of cylinders		6	8	9
Engine speed	r/min	900/1000	900/1000	900/1000
Mean piston speed	m/s	10/11	10/11	10/11
Max. continuous rating (MCR)	kW	1460/1620	1940/2160	2190/2430
Max. continuous rating (MCR)	BHP (metric)	1985/2205	2675/2935	2980/3305
Mean effective pressure (BMEP)	bar	18.5	18.5	18.5
Specific energy consumpion	kJ/kWh	7550	7550	7550
Specific lub. oil consumpion	g/kWh	0.4	0.4	0.4
Cooling water temp. engine outlet	°C	90	90	90

Propulsion engines – Gas

Bergen B35:40L





Principal dimensions

Cylinder diameter 350mm. Piston stroke 400mm.

Engine type	A	B	C	D	Weight dry engine
B35:40L8PG*	5430	6423	3898	1955	40000 kg
B35:40L9PG	5950	6943	3897	2042	44800 kg

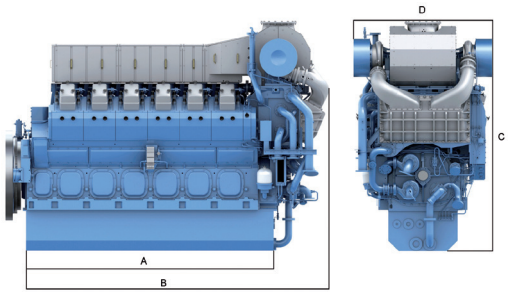
Technical data

Engine type		B35:40L8PG*	B35:40L9PG
Number of cylinders		8	9
Engine speed	r/min	750	750
Mean piston speed	m/s	10	10
Max. continuous rating (MCR)	kW	3500	3940
Max. continuous rating (MCR)	BHP (metric)	4760	5360
Mean effective pressure (BMEP)	bar	18.2	18.2
Specific energy consumpion	kJ/kWh	7550	7550
Specific lub. oil consumpion	g/kWh	0.4	0.4
Cooling water temp. engine outlet	°C	90	90

* Subject to approval prior to sales

Propulsion engines – Gas

Bergen B35:40V



Principal dimensions

Cylinder diameter 350mm. Piston stroke 400mm.

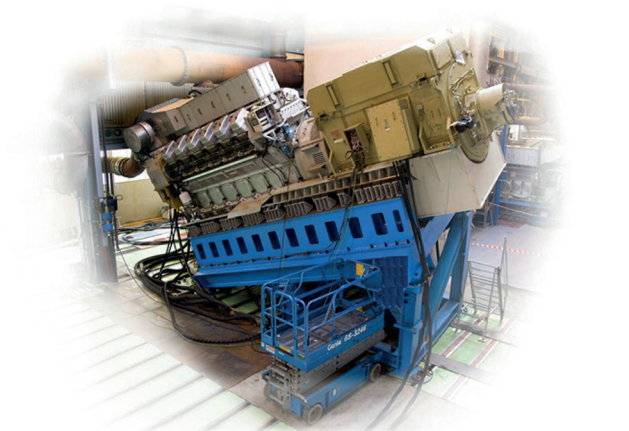
Engine type	A	B	C	D	Weight dry engine
B35:40V12PG	5316	6330	4443	3025	57500 kg

Technical data

Engine type		B35:40V12PG*
Number of cylinders		12
Engine speed	r/min	750
Mean piston speed	m/s	10
Max. continuous rating (MCR)	kW	5400
Max. continuous rating (MCR)	BHP (metric)	7750
Mean effective pressure (BMEP)	bar	18.7
Specific energy consumpion	kJ/kWh	7475
Specific lub. oil consumpion	g/kWh	0.4
Cooling water temp. engine outlet	°C	90

* Fuel gas inlet only available at the flywheel end.

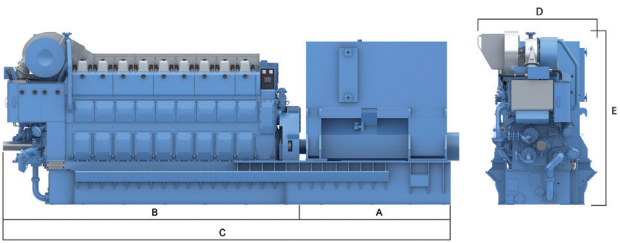
Designed for robustness, harsh operational environments, and exceptional levels of reliability



- Compact and powerful
- Low fuel oil consumption
- No leakage of fuel to lubricating oil system
- Service friendly
- Impulse type turbo charging system
  - Optimum response at all engine load points
- Super silent resilient mounting

Generating Set – Liquid fuel

Bergen C25:33L



Principal dimensions

Cylinder diameter 250mm.

						Weights dry		
Engine type	A	B	C	D	E	Engine**	Alternator	Total
C25:33L6A	2698	4176	6874	2300	3195	23960 kg	10350 kg	34310 kg
C25:33L8A	2838	4796	7709	2304	3261	30200 kg	12200 kg	42400 kg
C25:33L9A	3038	5176	8214	2304	3230	30900 kg	12200 kg	43100 kg

Technical data

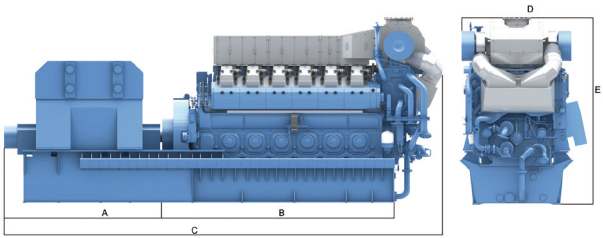
Engine type		C25:33L6A	C25:33L8A	C25:33L9A
Number of cylinders		6	8	9
Engine speed	r/min	900/1000*	900/1000*	900/1000*
Mean piston speed	m/s	10/11	10/11	10/11
Max. cont. rating (MCR)	kW	1920/2000	2560/2665	2880/3000
Max. cont. rating altern, (η=0.96)	kW	1843/1920	2457/2558	2764/2880
Max. cont. rating altern, (Cosφ=0.8)	kVA	2303/2400	3071/3197	3455/3600
Max. cont. rating altern, (Cosφ=0.9)	kVA	2047/2133	2730/2961	3071/3200
Mean effective pressure (BMEP)	bar	26.4/24.7	26.4/24.7	26.4/24.7
Specific fuel consumpion*	g/kWh	182/185	182/185	182/185
Specific lub. oil consumpion	g/kWh	0.7	0.7	0.7
Cooling water temp. engine outlet	°C	90	90	90

*MDO operations. Engine ** Engine and foundation

Dimensions given apply for resiliently mounted engines. Choice of alternator may effect the given dimensions and weights.

Generating Set – Liquid fuel

Bergen B32:40V



Principal dimensions

Cylinder diameter 320mm.
Piston stroke 400mm.

						Weights dry		
Engine type	A	B	C	D	E	Engine**	Alternator	Total
B32:40V12A	3596	6040	10036	3110	4645	71475 kg	21250 kg	92725 kg
B32:40V16A	4564	7492	12056	3192	4612	90010 kg	32000 kg	122010 kg

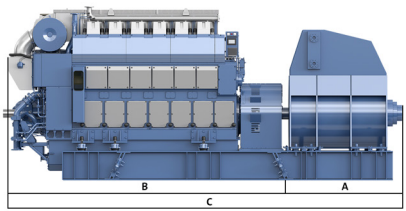
Technical data

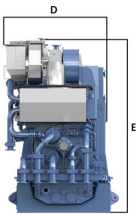
Engine type		B32:40V12A	B32:40V16A
Number of cylinders		12	16
Engine speed	r/min	720/750	720/750
Mean piston speed	m/s	9.6/10	9.6/10
Max. cont. rating (MCR)	kW	5760/6000	7680/8000
Max. cont. rating altern, (η=0.97)	kW	5587/5820	7449/7760
Max. cont. rating altern, (Cosφ=0.8)	kVA	6983/7275	9311/9700
Max. cont. rating altern, (Cosφ=0.9)	kVA	6207/6466	8276/8622
Mean effective pressure (BMEP)	bar	24.9	24.9
Specific fuel consumpion	g/kWh	183/184	183/184
Specific lub. oil consumpion	g/kWh	0.8	0.8
Cooling water temp. engine outlet	°C	90	90

Engine ** Engine and foundation
Dimensions given apply for resiliently mounted engines. Choice of alternator may effect the given dimensions and weights.

Generating Set – Liquid fuel

Bergen B33:45L





Principal dimensions

Cylinder diameter 330mm.
Piston stroke 450mm.

						Weights dry		
Engine type	A	B	C	D	E	Engine**	Alternator	Total
B33:45L6A	3410	5870	9280	2431	4100	46000 kg	18200 kg	64200 kg
B33:45L7A	3410	6405	9815	2431	4100	53100 kg	19600 kg	72700 kg
B33:45L8A	3505	6940	10445	2488	4250	60100 kg	21000 kg	81100 kg
B33:45L9A	3505	7475	10980	2488	4250	67100 kg	22300 kg	89400 kg
B33:45V12A*	4033	6870	10900	3140	4800	85000 kg	25000 kg	110000 kg

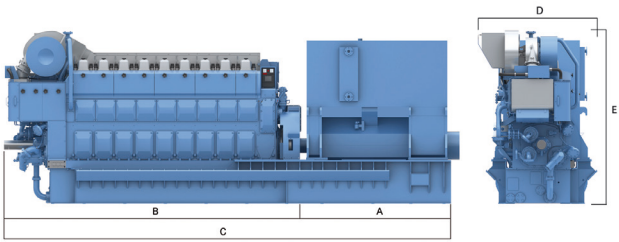
Technical data

Engine type		B33:45L6A	B33:45L7A	B33:45L8A	B33:45L9A	B33:45V12A*
Number of cylinders		6	7	8	9	12
Engine speed	r/min	720/750	720/750	720/750	720/750	720
Mean piston speed	m/s	10.8/11.2	10.8/11.2	10.8/11.2	10.8/11.2	10.8/11.2
Max. cont. rating (MCR)	kW	3600	4200	4800	5400	7200
Max. cont. rating altern, (η=0.97)	kW	3492	4074	4656	5238	6950
Max. cont. rating altern, (Cosφ=0.8)	kVA	4365	5093	5820	6548	8690
Max. cont. rating altern, (Cosφ=0.9)	kVA	3880	4526	5173	5820	7722
Mean effective pressure (BMEP)	bar	26/25	26/25	26/25	26/25	26
Specific fuel consumpion	g/kWh	177	177	177	177	176
Specific lub. oil consumpion	g/kWh	0.5	0.5	0.5	0.5	0.8
Cooling water temp. engine outlet	^{o}C	90	90	90		90

*Preliminary data. Engine ** Engine and foundation
Dimensions given apply for resiliently mounted engines. Choice of alternator will effect the given dimensions and weights.

Generating Set – Gas

Bergen C26:33L



Principal dimensions

Cylinder diameter 260mm.
Piston stroke 330mm.

						Weights dry		
Engine type	A	B	C	D	E	Engine**	Alternator	Total
C26:33L6AG	2835	4176	7011	2304	3161	22605 kg	11300 kg	33905 kg
C26:33L8AG	2835	4936	7771	2304	3161	31520 kg	11300 kg	42820 kg
C26:33L9AG	2835	5316	8315	2304	3161	34720 kg	11300 kg	46020 kg

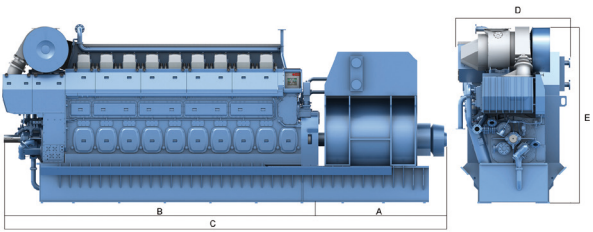
Technical data

Engine type		C26:33L6AG	C26:33L8AG*	C26:33L9AG
Number of cylinders		6	8	9
Engine speed	r/min	900/1000	900/1000	900/1000
Frequency	hz	60/50	60/50	60/50
Mean piston speed	m/s	10/11	10/11	10/11
Max. cont. rating (MCR)	kW	1460/1620	1940/2160	2190/2430
Max. cont. rating altern, (η=0.96)	kW	1401/1555	1840/2050	2102/2332
Max. cont. rating altern, (Cosφ=0.8)	kVA	1751/1943	2300/2563	2627/2915
Max. cont. rating altern, (Cosφ=0.9)	kVA	1556/1727	2044/2278	2335/2591
Mean effective pressure (BMEP)	bar	18.5	18.5	18.5
Specific energy consumpion	KJ/kWh	7550	7550	7550
Specific lub. oil consumpion	g/kWh	0.4	0.4	0.4
Cooling water temp. engine outlet	°C	90	90	90

* In progress – release date to be announced at later stage. Engine** Engine and foundation
Depending on type of alternator the weight and dimensions may change.

Generating Set – Gas

Bergen B35:40L



Principal dimensions

Cylinder diameter 350mm.
Piston stroke 400mm.

						Weights dry		
Engine type	A	B	C	D	E	Engine**	Alternator	Total
B35:40L8AG*	3315	7060	10375	2310	3855	53300 kg	17750 kg	71050 kg
B35:40L9AG	3904	6944	10848	2630	4445	63245 kg	16300 kg	79545 kg

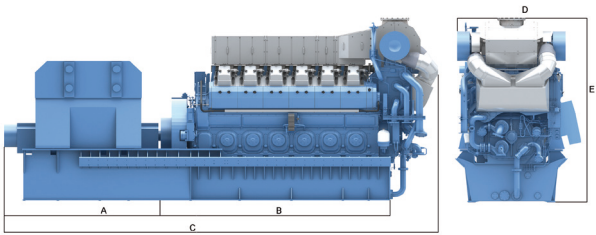
Technical data

Engine type		B35:40L8AG*	B35:40L9AG
Number of cylinders		8	9
Engine speed	r/min	720/720	720/750
Frequency	hz	60/50	60/50
Mean piston speed	m/s	9.6/10	9.6/10
Max. cont. rating (MCR)	kW	3360/3500	3780/3940
Max. cont. rating altern, (η=0.97)	kW	3260/3395	3666/3821
Max. cont. rating altern, (Cosφ=0.8)	kVA	4075/4243	4582/4776
Max. cont. rating altern, (Cosφ=0.9)	kVA	3622/3772	4073/4245
Mean effective pressure (BMEP)	bar	18.2	18.2
Specific energy consumpion	KJ/kWh	7550	7550
Specific lub. oil consumpion	g/kWh	0.4	0.4
Cooling water temp. engine outlet	°C	90	90

* Subject to approval prior to sales. Engine** Engine and foundation
Depending on type of alternator the weight and dimensions may change.

Generating Set – Gas

Bergen B35:40V



Principal dimensions

Cylinder diameter 350mm.
Piston stroke 400mm.

						Weights dry		
Engine type	A	B	C	D	E	Engine**	Alternator	Total
B35:40V12AG	4072	6040	10112	3110	4667	74250 kg	22820 kg	97070 kg
B35:40V20AG	3862	8120	13053	3804	4320	111800 kg	35000 kg	146794 kg

Technical data

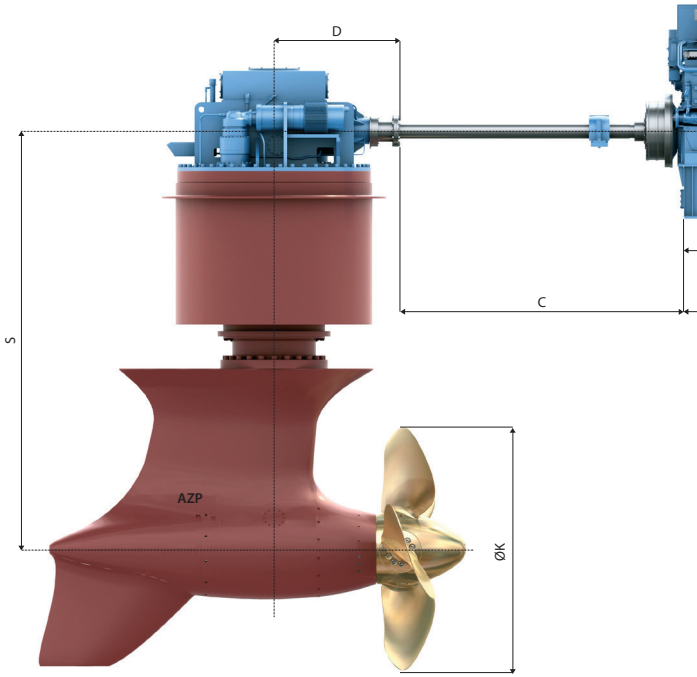
Engine type		B35:40V12AG	B35:40V20AG*
Number of cylinders		12	20
Engine speed	r/min	720/750	720/750
Frequency	hz	60/50	60/50
Mean piston speed	m/s	9.6/10	9.6/10
Max. cont. rating (MCR)	kW	5180/5400	9200/9500
Max. cont. rating altern, (η=0.97)	kW	5307/5530	9000/9380
Max. cont. rating altern, (Cosφ=0.8)	kVA	6634/6912	11250/11725
Max. cont. rating altern, (Cosφ=0.9)	kVA	5898/6114	10000/10422
Mean effective pressure (BMEP)	bar	18.2	20.0
Specific energy consumpion	KJ/kWh	7475	7500
Specific lub. oil consumpion	g/kWh	0.4	0.4
Cooling water temp. engine outlet	°C	90	90

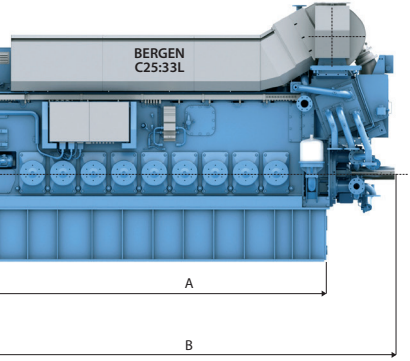
*Available for marine applications upon request. Engine** Engine and foundation
Depending on type of alternator the weight and dimensions may change.

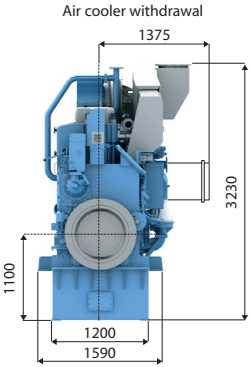

SAM
DEPRO

Propulsion systems

Bergen C25:33L - AZIPULL




BERGEN
C25:33L
A
B


Air cooler withdrawal
1375
3230
1100
1200
1590

Bergen C25:33L - AZIPULL

Typical parameters for AT applications with 17 knots speed
(max. speed for AZIPULL - 24 knots)

Diesel engine technical data					Azimuth thruster technical data			
Engine type	Engine mass kg	Engine power kW	Cyl. no.	Engine speed rpm	Azimuth type and size	Azimuth mass* kg	Min. prop speed rpm	
C25:33L6P	18300	1920	6	900	AZP100	30500	188	
C25:33L8P	23200	2560	8	900	AZP100	30500	237	
C25:33L8P	23200	2560	8	900	AZP120	45000	174	
C25:33L9P	25000	2880	9	900	AZP100	30500	248	
C25:33L9P	25000	2880	9	900	AZP120	45000	174	
C25:33L6P	18300	2000	6	1000	AZP100	30500	175	
C25:33L8P	23200	2665	8	1000	AZP100	30500	229	
C25:33L8P	23200	2665	8	1000	AZP120	45000	167	
C25:33L9P	25000	3000	9	1000	AZP120	45000	167	

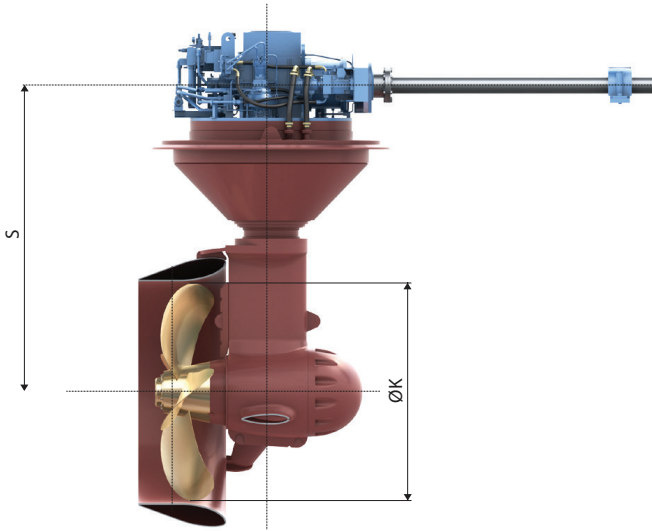
Additional notes (*):
- Mass of azimuth unit is based on minimum stem length (S)
- Minimum stem length (S) can be increased in step of 200 mm for AZP100, 250 mm for AZP120 and 300 mm for AZP150
- Length (C) and type of intermediate shaft can vary from short straight shafts to long cardan shafts

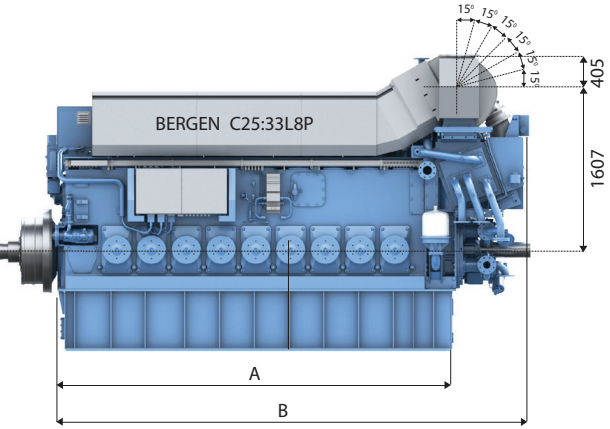
	Main dimensions					
	A	B	C	D	K	S
	Sump length mm	Engine length mm	Interm. shaft* mm	Input shaft mm	Max. prop. dia. mm	Min. stem length* mm
	3170	4036		1490	2800	4520
	3930	4796		1490	2600	4520
	3930	4796		1750	3300	4590
	4310	5176		1490	2600	4520
	4310	5176		1750	3300	4590
	3170	4036		1490	2800	4520
	3930	4796		1490	2800	4520
	3930	4796		1750	3300	4590
	4310	5176		1750	3300	4590

Note: The table shows typical data for Rolls-Royce twin screw propulsion systems for free running ships. The azimuth unit data are given without ice class based on standard gear ratios. The data is not binding and may change without notice

Propulsion systems

Bergen C25:33L - Rolls-Royce azimuth thruster
Typical parameters for harbour tugs with speed up to 16 knots




15°
15°
15°
15°
15°
15°
405
1607
BERGEN C25:33L8P
A
B

Bergen C25:33L - Rolls-Royce azimuth thruster

Typical parameters for harbour tugs with speed up to 16 knots

Diesel engine technical data					Main dimensions		
					A	B	
Engine type	Engine mass kg	Engine power kW	Cyl. no.	Engine speed rpm	Sump length mm	Engine length mm	
C25:33L6P	18300	2000	6	1000	3170	4036	
C25:33L6P	18300	2000	6	1000	3170	4036	
C25:33L8P	23200	2560	8	900	3930	4796	
C25:33L8P	23200	2665	8	1000	3930	4796	
C25:33L9P	25000	3000	9	1000	4310	5176	
C25:33L9P	25000	3000	9	1000	4310	5176	

Dimensions
K Propeller diameter
S Stem length

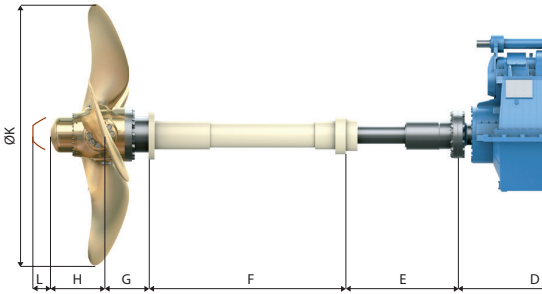
Construction
FP Fixed Pitch Propeller
CP Controllable Pitch Propeller
Ducted with TK-nozzle
Open without nozzle.

			Main dimensions		
				K	S
	Azimuth type and size	Azimuth mass* kg	Bollard pull*** tons	Prop. dia. FP/CP mm	Min. stem length* mm
	Ducted FP/CP	Ducted FP/CP			
	US 205	29000	54/56	2300/2400	3305
	US 255	29000	68/71	2600/2800	3625
	US 35	37500	90	3000	3650
	US 25	29000	69	2600	3800
	US 35	37500	90	3000	3650
	US 25	30000	79	2800	3800

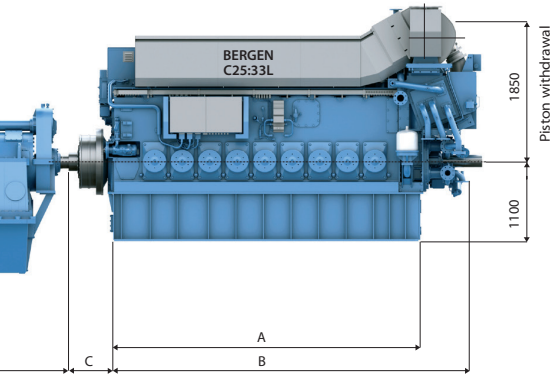
* Dry weight in metric tons of weld-in installation FP / CP propeller
** The power figures on table are for ship assisting harbour tugs driven by diesel engine.
The actual power figures are defined acc. to the application, prime mover, classification etc
***Estimated metric tons per two (2) units.
All data is subject to change without prior notice.

Propulsion systems

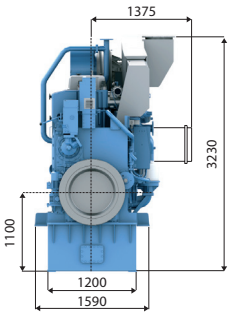
Engine C25:33L



L, dismantling space for hub cylinder



Air cooler withdrawal



Engine C25:33L

Typical parameters for single screw cargo vessel with speed up to 17 knots

Engine type	Engine power kW	Cly. no.	Engine speed rpm	Gear size	Min. prop. speed rpm	K prop. dia.mm	Hub size cm	
C25:33L6P	1920	6	900	480	210	2900	66A/4I	
C25:33L6P	2000	6	1000	480	222	2800	66A/4I	
C25:33L6P	1920	6	900	550	167	3300	72A/4I	
C25:33L6P	2000	6	1000	550	175	3200	72A/4I	
C25:33L6P	2000	6	1000	600	180	3200	72A/4I	
C25:33L8P	2560	8	900	550	195	3200	72A/4I	
C25:33L8P	2665	8	1000	550	208	3100	72A/4I	
C25:33L8P	2560	8	900	600	185	3300	72A/4I	
C25:33L8P	2665	8	1000	600	197	3200	72A/4I	
C25:33L8P	2560	8	900	750	145	3800	79A/4I	
C25:33L8P	2665	8	1000	750	160	3600	79A/4I	
C25:33L9P	2880	9	900	600	200	3300	72A/4I	
C25:33L9P	3000	9	1000	600	212	3200	79A/4I	
C25:33L9P	2880	9	900	750	145	3900	86A/4I	
C25:33L9P	3000	9	1000	750	160	3700	79A/4I	

G, is project specific. Dimension shown is based on standard sealing length
F, Stern tube length is project specific dimension, 2500mm in this example
E, is project specific but a minimum service space is required
C, Length of elastic coupling is project specific
Prop mass * is based on 4m propeller shaft

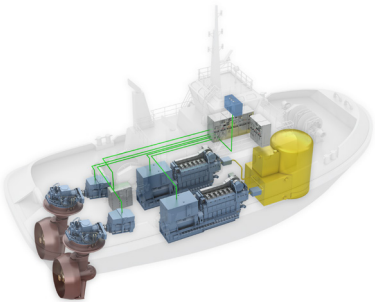
	A mm	B mm	D mm	E mm	G mm	H mm	L mm	Gear mass kg	Prop. mass* kg	Engine mass kg
	3170	4036	1610	1550	565	566	211	3300	4300	17500
	3170	4036	1610	1550	565	566	211	3300	4250	17500
	3170	4036	1795	1550	601	671	217	5300	5300	17500
	3170	4036	1795	1550	601	671	217	5300	5200	17500
	3170	4036	1812	1550	601	671	217	5800	5100	17500
	3930	4796	1795	1550	601	671	217	5300	5700	20700
	3930	4796	1795	1550	601	671	217	5300	5600	20700
	3930	4796	1812	1550	601	671	217	5800	5700	20700
	3930	4796	1812	1550	601	671	217	5800	5700	20700
	3930	4796	2020	1600	640	677	237	10200	7100	20700
	3930	4796	2020	1600	640	677	237	10200	6900	20700
	4310	5176	1812	1600	601	671	217	5800	6100	23900
	4310	5176	1812	1550	640	677	237	5800	6300	23900
	4310	5176	2020	1650	681	737	253	10200	8100	23900
	4310	5176	2020	1650	640	677	237	10200	7400	23900

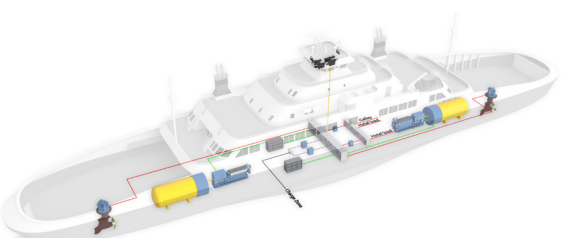
Note: The table shows typical data for Rolls-Royce single screw propulsion systems for free running ships. The propulsion unit data are given without ice class based on standard gear ratios. The data is not binding and may change without notice.

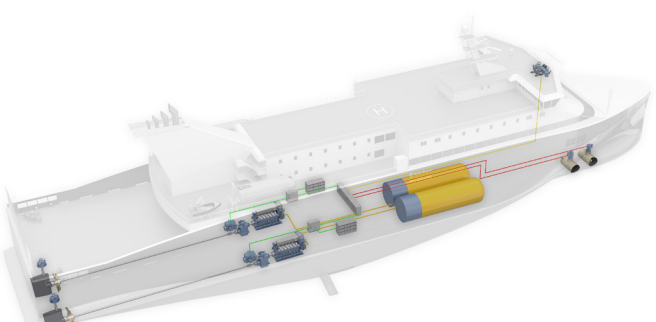
Delivering clean power for the future

The marine industry relies on fuel oils for most powering needs, but tighter emission regulations and the need to 'go green' are starting to convince operators to consider alternatives. Rolls-Royce gas engines have proven themselves to be the cleanest, most efficient piston engines on the market. Since the introduction of the Bergen lean-burn technology more than 700 gas engines have been delivered and over 30 million operating hours accumulated.

Hybrid and electric gas propulsion systems







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